

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the **PATENT APPLICATION** of:

Joseph A. Kwak

**Application No.:** 09/939,410

**Confirmation No.:** 4309

**Filed:** August 24, 2001

**For:** PHYSICAL LAYER AUTOMATIC  
REPEAT REQUEST (ARQ)

**Group:** 2681

**Examiner:** Saba Tsegaye

**Our File:** I-2-0203US

**Date:** August 16, 2005

**10 PAGES VIA FACSIMILE  
TO 571-273-0052**

**COMMUNICATION**

**RECEIVED**

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U.S. PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES

Board of Patent Appeals and Interferences  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Communication requests a change in the docketing of Appeal  
No. 2005-2394, as per the Board of Patent Appeals and Interferences Docketing  
Notice.

Applicant received the Board of Patent Appeals and Interferences Docketing  
Notice mailed August 5, 2005. The Docketing Notice indicated that a Request for  
Hearing was not filed. However, Applicants did request an Oral Hearing on  
September 14, 2004. Enclosed is a copy of that Request for Oral Hearing, the date

**Applicant:** Joseph A. Kwak.  
**Application No.:** 10/084,414

stamped return receipt postcard and the Board of Patent Appeals and Interferences  
Docketing Notice.

Applicants respectfully request that an Oral Hearing be held for this matter.

Respectfully submitted,

Joseph A. Kwak

By

  
Jeffrey M. Glabicki  
Registration No. 42,584

Volpe and Koenig, P.C.  
United Plaza, Suite 1600  
30 South 17th Street  
Philadelphia, PA 19103  
Telephone: (215) 568-6400  
Facsimile: (215) 568-6499

JMG/pf

I-2-0203 US



## United States Patent and Trademark Office

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VOLPE AND KOENIG, P.C.  
DEPT. ICC  
UNITED PLAZA, SUITE 1600  
30 SOUTH 17TH STREET  
PHILADELPHIA, PA 19103

Paper No:  
Appeal No: 2005-2394  
Application: 09/939,410  
Appellant: Joseph A. Kwak

MAILED

AUG - 5 2005

PAT. & T.M. OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES

## Board of Patent Appeals and Interferences Docketing Notice

Application 09/939,410 was received from the Technology Center at the Board on June 20, 2005 and has been assigned Appeal No: 2005-2394.

A review of the file indicates that the following documents have been filed by appellant:

Appeal Brief filed on:	April 14, 2004
Reply Brief filed on:	September 16, 2004
Request for Hearing filed on:	NONE

In all future communications regarding this appeal, please include both the application number and the appeal number.

The mailing address for the Board is:

**BOARD OF PATENT APPEALS AND INTERFERENCES  
UNITED STATES PATENT AND TRADEMARK OFFICE  
P.O. BOX 1450  
ALEXANDRIA, VIRGINIA 22313-1450**

The facsimile number of the Board is 571-273-0052. Because of the heightened security in the Washington D.C. area, facsimile communications are recommended. Telephone inquiries can be made by calling 571-272-9797 and should be directed to a Program and Resource Administrator.

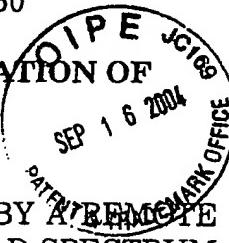
By order of the Board of Patent Appeals and Interferences

AUG - 5 2005

2005

Atty. Docket # I-2-0203US  
Mailed prepaid on: September 14, 2004  
by [x] First Class or [ ] Express Mail to: Mail  
Stop AF, Commissioner for Patents, P.O. Box  
1450, Alexandria, VA 22313-1450

IN RE PATENT APPLICATION OF  
Inventors: Joseph A. Kwak  
Appln. No.: 09/939,410  
Filed: August 24, 2001  
Title: METHOD EMPLOYED BY A REMOTE  
TERMINAL FOR SPREAD SPECTRUM  
CDMA SUBTRACTIVE INTERFERENCE  
CANCELLATION



Kindly acknowledge receipt of the following items with respect to the above-identified matter by placing your date stamp hereon and mailing this self addressed and posted card:

Transmittal Form with Certificate of  
Transmission/Mailing (1 pg.);  
Fee Transmittal Form (1 pg.);  
Request for Oral Hearing Before The Board of  
Patent Appeals and Interference RECEIVED; and  
Reply Brief to Examiner's Answer (3 pgs.). AM/PM

JMG/pf

SEP 22 2004

VOLPE & KOENIG, P.C.

PTO/SB/21 (04-04)

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FORM**

(to be used for all correspondence after initial filing)

	Application Number	09/939,410
	Filing Date	August 24, 2001
	First Named Inventor	Joseph A. Kwak
	Art Unit	2662
	Examiner Name	Saba Tsegaye
Total Number of Pages in This Submission	Attorney Docket Number	I-2-0203US

ENCLOSURES (Check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance communication to Technology Center (TC)
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	<input type="checkbox"/> Request for Oral Hearing
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund	<input type="checkbox"/> Reply Brief To Examiner's Answer
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Response to Missing Parts/ Incomplete Application		
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		
Remarks		

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm or Individual name	Jeffrey M. Glabicki	Reg. No. 42,584
Signature		
Date	September 14, 2004	

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Typed or printed name	Jeffrey M. Glabicki
Signature	
Date	September 14, 2004

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/17 (10-03)

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# FEE TRANSMITTAL

## for FY 2004

*Effective 10/01/2003. Patent fees are subject to annual revision.*

 Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 290.00)

## Complete if Known

Application Number	09/939,410
Filing Date	August 24, 2001
First Named Inventor	Joseph A. Kwak
Examiner Name	Saba Tsegaye
Art Unit	2662
Attorney Docket No.	I-2-0203US

## METHOD OF PAYMENT (check all that apply)

 Check  Credit card  Money Order  Other  None
 Deposit Account:

Deposit Account Number	09-0435
Deposit Account Name	InterDigital Communications Corporation

The Director is authorized to: (check all that apply)

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- Charge fee(s) indicated below
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- Credit any overpayments
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- Charge any additional fee(s) or any underpayment of fee(s)
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## FEE CALCULATION

## 1. BASIC FILING FEE

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1001 770	2001 385	Utility filing fee	
1002 340	2002 170	Design filing fee	
1003 530	2003 265	Plant filing fee	
1004 770	2004 385	Reissue filing fee	
1005 160	2005 80	Provisional filing fee	
SUBTOTAL (1)		(\$ 0.00)	

## 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	Independent Claims	Multiple Dependent	Extra Claims	Fee from below	Fee Paid

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
1202 18	2202 9	Claims in excess of 20
1201 86	2201 43	Independent claims in excess of 3
1203 290	2203 145	Multiple dependent claim, if not paid
1204 86	2204 43	** Reissue independent claims over original patent
1205 18	2205 9	** Reissue claims in excess of 20 and over original patent
SUBTOTAL (2)		(\$ 0.00)

\*\*or number previously paid, if greater; For Reissues, see above

## FEE CALCULATION (continued)

## 3. ADDITIONAL FEES

Large Entity	Small Entity	Fee Description	Fee Paid
1051 130	2051 65	Surcharge - late filing fee or oath	
1052 50	2052 25	Surcharge - late provisional filing fee or cover sheet	
1053 130	1053 130	Non-English specification	
1812 2,520	1812 2,520	For filing a request for ex parte reexamination	
1804 920*	1804 920*	Requesting publication of SIR prior to Examiner action	
1805 1,840*	1805 1,840*	Requesting publication of SIR after Examiner action	
1251 110	2251 55	Extension for reply within first month	
1252 420	2252 210	Extension for reply within second month	
1253 950	2253 475	Extension for reply within third month	
1254 1,480	2254 740	Extension for reply within fourth month	
1255 2,010	2255 1,005	Extension for reply within fifth month	
1401 330	2401 165	Notice of Appeal	
1402 330	2402 165	Filing a brief in support of an appeal	
1403 290	2403 145	Request for oral hearing	290.00
1451 1,510	1451 1,510	Petition to institute a public use proceeding	
1452 110	2452 55	Petition to revive - unavoidable	
1453 1,330	2453 665	Petition to revive - unintentional	
1501 1,330	2501 665	Utility issue fee (or reissue)	
1502 480	2502 240	Design issue fee	
1503 640	2503 320	Plant issue fee	
1460 130	1460 130	Petitions to the Commissioner	
1807 50	1807 50	Processing fee under 37 CFR 1.17(q)	
1806 180	1806 180	Submission of Information Disclosure Stmt	
8021 40	8021 40	Recording each patent assignment per property (times number of properties)	
1809 770	2809 385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810 770	2810 385	For each additional invention to be examined (37 CFR 1.129(b))	
1801 770	2801 385	Request for Continued Examination (RCE)	
1802 900	1802 900	Request for expedited examination of a design application	
Other fee (specify)			
*Reduced by Basic Filing Fee Paid			
SUBTOTAL (3)		(\$ 290.00)	

(Complete if applicable)

Name (Print/Type)	Signature	Registration No. (Attorney/Agent)	Telephone	Date
Jeffrey M. Glabicki		42,584	215-568-6400	September 14, 2004

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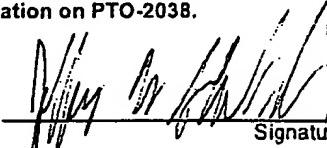
This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PTO/SB/32 (06-04)

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REQUEST FOR ORAL HEARING BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES		Docket Number (Optional)  I-2-0203US						
<p>I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on <u>September 14, 2004</u></p> <p>Signature </p> <p>Typed or printed name <u>Jeffrey M. Glabicki</u></p>		<p>In re Application of <b>Joseph A. Kwak</b></p> <table border="1"> <tr> <td>Application Number <b>09/939,410</b></td> <td>Filed <b>August 24, 2001</b></td> </tr> <tr> <td colspan="2">For METHOD EMPLOYED BY A REMOTE TERMINAL FOR SPREAD SPECTRUM CDMA SUBTRACTIVE INTERFERENCE CANCELLATION</td> </tr> <tr> <td>Art Unit <b>2662</b></td> <td>Examiner <b>Saba Tsegaye</b></td> </tr> </table>	Application Number <b>09/939,410</b>	Filed <b>August 24, 2001</b>	For METHOD EMPLOYED BY A REMOTE TERMINAL FOR SPREAD SPECTRUM CDMA SUBTRACTIVE INTERFERENCE CANCELLATION		Art Unit <b>2662</b>	Examiner <b>Saba Tsegaye</b>
Application Number <b>09/939,410</b>	Filed <b>August 24, 2001</b>							
For METHOD EMPLOYED BY A REMOTE TERMINAL FOR SPREAD SPECTRUM CDMA SUBTRACTIVE INTERFERENCE CANCELLATION								
Art Unit <b>2662</b>	Examiner <b>Saba Tsegaye</b>							
<p>Applicant hereby requests an oral hearing before the Board of Patent Appeals and Interferences in the appeal of the above-identified application.</p> <p>The fee for this Request for Oral Hearing is (37 CFR 1.17(d)) \$ <u>290.00</u></p> <p><input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by half, and the resulting fee is: \$ _____</p> <p><input type="checkbox"/> A check in the amount of the fee is enclosed.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input type="checkbox"/> The Director has already been authorized to charge fees in this application to a Deposit Account. I have enclosed a duplicate copy of this sheet.</p> <p><input checked="" type="checkbox"/> The Director is hereby authorized to charge any underpayments or credit any overpayment to Deposit Account No. <u>09-0435</u>. I have enclosed a duplicate copy of this sheet.</p> <p><input type="checkbox"/> A petition for an extension of time under 37 CFR 1.136(b) (PTO/SB/23) is enclosed. For extensions of time in reexamination proceedings, see 37 CFR 1.550.</p>								
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 <b>Signature</b> <b>Jeffrey M. Glabicki</b> <b>Typed or printed name</b> <b>215-568-6400</b> <b>Telephone number</b> <b>September 14, 2004</b> <b>Date</b>								
<p><b>NOTE:</b> Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p> <p><input checked="" type="checkbox"/> *Total of <u>1</u> forms are submitted.</p>								

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**PATENT****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE****In the PATENT APPLICATION of:**

Joseph A. Kwak

**Application No.:** 09/939,410**Confirmation No.:** 4309**Filed:** August 24, 2001For: METHOD EMPLOYED BY A REMOTE  
TERMINAL FOR SPREAD SPECTRUM  
CDMA SUBTRACTIVE INTERFERENCE  
CANCELLATION**Group:** 2662**Examiner:** Saba Tsegaye**Our File:** I-2-0203US**Date:** September 14, 2004**REPLY BRIEF TO EXAMINER'S ANSWER**

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Reply Brief is submitted in response to the Examiner's Answer dated July 14, 2004 [Paper No. 20]. In that answer, the Examiner restated the arguments set forth in the final rejection. Accordingly, Applicants believe that the Appeal Brief adequately addresses these issues. However, Applicant wishes to augment the Appeal Brief with respect to the Examiner's comments regarding use of a high level modulation, on page 17 first full paragraph of the Examiner's Answer. Schramm

**Applicant:** Joseph A. Kwak  
**Application No.:** 10/085,203

does not disclose selecting a higher capacity encoding/modulation scheme in view of retransmission statistics. The portion of Schramm which the Examiner relies upon in that paragraph is as follows:

Retransmission techniques operating in accordance with this exemplary embodiment can be summarized by way of the flowchart of FIG. 5. Therein, the loop including steps 60 and 62 waits until a negative ARQ message (indicating an erroneously received block) is received at the transmitting entity, i.e., the RBS 22 above, but can also be the mobile station 12. In the example described in the flowchart, each erroneously received block is sufficient to trigger a selection of a new modulation scheme, at step 64, for the retransmitted block. Then the block is resegmented (mapped) into a new number of bursts at step 66. Finally, the bursts are each modulated using the outer 16QAM modulation signal points, e.g., the subset of 16QAM amplitude coefficients associated with QPSK, at step 68, and retransmission occurs.

Reading this paragraph in its entirety, it is clear this paragraph only describes using a less robust modulation scheme. At steps 60 and 62, messages indicating that blocks were received erroneously are received. It states that each of the receipt messages is sufficient to trigger the selection of the new modulation scheme. This new modulation scheme is then subsequently described as using constellation points from 16QAM modulation (high modulation) to produce coefficients for QPSK (low modulation) modulation. Each received negative acknowledgement is adequate for the Schramm invention to drop from 16QAM to QPSK. However, nowhere within this paragraph or within Schramm does its describe going from, for instance, QPSK to 16QAM, let alone basing this on retransmission statistics.

**Applicant: Joseph A. Kwak  
Application No.: 10/085,203**

In view of the foregoing, Applicant respectfully requests that the rejections be withdrawn and all pending claims pass to allowance.

Respectfully submitted,

Joseph A. Kwak

By

Jeffrey M. Glabicki  
Registration No. 42,584  
(215) 568-6400

Volpe and Koenig, P.C.  
United Plaza, Suite 1600  
30 South 17th Street  
Philadelphia, PA 19103

JMG/pf  
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